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EXAMINER

TAHA, SHAQ

ART UNIT	PAPER NUMBER
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2109

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,377	Applicant(s) BLACKWELL ET AL.	
	Examiner shaq taha	Art Unit 2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/07/2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 19 rejected less than 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- As per claim 19, Applicant has claimed “a computer program” for causing a computer to “control” instructions in the preamble to these claims; this implies that Applicant is claiming a system of software, per se, lacking the hardware necessary to realize any of the underlying functionality. Therefore, claim 15 is directed to non-statutory subject matter as computer programs, per se, i.e. the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed

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elements of a computer, which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1, 2, 4 – 9, 11, 13 – 18, and 20 – 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Zintel et al. (US 2002/0029256).

- Regarding claim 1, Zintel teaches a method of operation of a networked device in a network having at least one other device, **[Fig.1 & 2]**; the method including: sending (104) a simple device description query message to at least one other device requesting a simple device

description, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, from a URL provided by the device in an initial discovery message, (See Abstract)];**

receiving (106) from the other device a simple device description message of defined length including a device type value representing the type of the other device, **[The set of modules that enable communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Paragraph 0061)];**

sending (108) an extended device description query message to the other device requesting an extended device description from the other device, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)];**

and receiving (110) from the other device an extended device description of variable length, **[The description also includes a list of any embedded devices or services, as well as URLs for control, eventing, and presentation, (See Abstract)].**

- Regarding claim 2, Zintel teaches a method that establishing (102) the network address of another device or other devices before the step of

sending (104) a simple device description to at least one other device,
[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)].

- Regarding claim 4, Zintel teaches a method that the networked device is a controller device (2) comprising a list (24) of device types that the controller can control, **[A prevalent feature of these connectivity scenarios is to provide remote access and control of connected devices and services from another device with user interface capabilities, (Paragraph 0003)].**
- Regarding claim 5, Zintel teaches a method, the method further including determining whether the networked device can control another device by: determining the lowest level of device type that either is the device type of the other device or is a higher level device type from which the device type of the other device depends, in the list of device types that can be controlled by the controller, to determine the extent to which the networked device can control the other device, **[FIGS. 11 and 12 are block diagrams illustrating an internal software architecture of the user control point and controlled device in the device control model of FIG. 3, (Paragraph 0022)];**

- Regarding claim 6, Zintel teaches a method further including: receiving a controller query message from another device including an requested device type value to request whether the controller is able to control a device of the requested device type, **[RehydratorInvoke Service Action O will send an HTTP request to the control server identified by the second parameter, (Paragraph 0033)];**

and responding with a controller response message including a device type value representing the lowest level of device type in the list of device types that either is the requested device type or is a higher level device type from which the requested device type depends, **[The Dehydrator will wait for the HTTP response to this request, (Paragraph 0034)].**

- Regarding claim 7, Zintel teaches a method wherein the predetermined top-level elements in the device type hierarchy further include a composite device type, **[The formal definition of a Device Type. A Device Definition includes a Device Type Identifier, the fixed elements in the Description Document, the required set of Service Definitions in the Root Device, and the hierarchy of required Devices and Service Definition, (Paragraph 0069)];**
and the networked device is of the composite device type having the functionality of an integer number of other devices, **[Fixed point,**

integer number. May have a leading sign. May have leading zeros.

(No currency symbol, (Paragraph 0786));

the method further comprising: responding to a received simple device description query message by sending a simple device description message (230) including the device type value (232) representing the device as a composite device, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)];** and further an integer sub-device number being the number (234) of other devices, **[Fixed point, integer number. May have a leading sign. May have leading zeros. (No currency symbol, (Paragraph 0786))].**

- Regarding claim 8, Zintel teaches a method of operation of a networked device, including: receiving (104) a simple device description query message from one of the other devices requesting a simple device description, **[The set of modules that enable communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Paragraph 0061)];**

sending (106) to the other device a simple device description message of defined length including a device type value representing the type of the networked device, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)];**

receiving (108) an extended device description query message from the other device requesting an extended device description from the networked device, **[The set of modules that enable communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Paragraph 0061)];**

and sending (110) to the other device an extended device description of variable length, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)];**

- Regarding claim 9, Zintel teaches a networked device, including: a transceiver (8) for sending and receiving messages, **[Fig.23, Ref # 620];**

and a message handler (26, 182) arranged to carry out the steps, **[In addition to the creating the Service object, the Rehydrator sets up**

its internal data structures so that it can properly handle requests to control the service, (Paragraph 0224)];

of: on receiving (104) a simple device description query message from one of the other devices, **[The set of modules that enable communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Paragraph 0061)];**

sending (106) to the other device a simple device description message of defined length including a device type value representing the type of the networked device, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, from a URL provided by the device in an initial discovery message, (See Abstract)];**

and on receiving (108) an extended device description query message from another device, **[The set of modules that enable communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Paragraph 0061)];**

sending (110) to the other device an extended device description of variable length, **[Following discovery of a UPnP device, an entity**

can learn more about the device and its capabilities by retrieving the device's description, from a URL provided by the device in an initial discovery message, (See Abstract)];

- Regarding claim 11, Zintel teaches a networked device, including: a transceiver (8) for sending and receiving messages, **[Fig.23, Ref # 620];**
a message handler (26, 182) arranged to carry out the steps, **[In addition to the creating the Service object, the Rehydrator sets up its internal data structures so that it can properly handle requests to control the service, (Paragraph 0224)];**
of: sending a simple device description query message to another device requesting a simple device description, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, from a URL provided by the device in an initial discovery message, (See Abstract)];**
receiving from the other device a simple device description message of fixed length including a device type value representing the type of the other device and a field indicating whether an extended device description is available, **[The set of modules that enable**

communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Paragraph 0061));

and further arranged to optionally carry out the steps of: testing the simple device description message to determine whether an extended device description is available, **[automated tools can automatically check to ensure that the templates and descriptions have all required elements, are correctly nested, and have values of the correct data types, (Paragraph 0605)];**

sending an extended device description query message to the other device requesting an extended device description from the other device, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)];**

and receiving from the other device an extended device description of variable length, **[The set of modules that enable communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Paragraph 0061)].**

- Regarding claim 13, Zintel teaches a networked device wherein the networked device has the controller device type, wherein the networked device comprises a list of device types that can be controlled by the networked device, **[Fig. 1, and Fig. 2];** so that the networked device can determine the extent to which the networked device can control another device by determining the lowest level of device type that either is the device type of the other device or is a higher level device type from which the device type of the other device depends, in the list of device types that can be controlled by the controller, **[A prevalent feature of these connectivity scenarios is to provide remote access and control of connected devices and services from another device with user interface capabilities (e.g., a universal remote controller, handheld computer or digital assistant, cell phones, and the like), (Paragraph 0003)].**
- Regarding claim 14, Zintel teaches a networked device wherein the message handler is arranged: to receive a controller query message from another device including an requested device type value to request whether the controller is able to control a device of the requested device type, **[In addition to the creating the Service object, the Dehydrator sets up its internal data structures so that it can properly handle requests to control the service.**

Specifically, it creates a list of the properties and actions exported by the service, (Paragraph 0224)];

and to respond with a controller response message including a device type value representing the lowest level of device type in the list of device types that either is the requested device type or is a higher level device type from which the requested device type depends,

[Controlled Devices respond to discovery requests, accept incoming communications from User Control Points and may send Events to User Control Points, (Paragraph 0062)].

- Regarding claim 15, Zintel teaches a system, comprising a plurality of networked devices each having a transceiver for sending and receiving network messages, **[Figs.23 & 25];**

at least one networked device arranged to send a simple device query message to other devices and to receive and interpret simple device description messages subsequently received from the other devices,

[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)];

at least one networked device arranged to send an extended device query message to other devices and to receive and interpret extended device description messages subsequently received from the other

devices, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)];**

each of the networked devices being arranged to respond to an incoming simple device query message from another of the devices by sending a simple device description message of defined length including a device type value representing the type of the device,

[Controlled Devices respond to discovery requests, accept incoming communications from User Control Points and may send Events to User Control Points, (Paragraph 0062)];

and at least one of the networked devices is arranged to respond to an incoming extended device query message from another of the devices by sending an extended device description message, **[Controlled Devices respond to discovery requests, accept incoming communications from User Control Points and may send Events to User Control Points, (Paragraph 0062)].**

- Regarding claim 16, Zintel teaches a system, wherein the plurality of networked devices include at least one simple device without the capability to decompress messages and interpreting directly compressed messages, **[A module used by a UPnP Bridge that**

translates between UPnP protocols and the protocols used by Bridged and Legacy Devices, (Paragraph 0064)];

and at least one complex device including a message decompression arrangement (184) for decompressing the messages and a message interpreter for interpreting the decompressed messages, **[A typical Device Friendly Name will contain manufacturer and model information, and especially when interpreted by humans, can be used to enable a more precise identification of a UPnP Device from the set of discovered Devices, (Paragraph 0075)].**

- Regarding claim 17, Zintel teaches a system according to wherein the predetermined top level elements further include a composite device type, **[in device connectivity models requiring establishing persistent device relationship configurations, such one-time and occasional relationships between these devices would results in configuration instability requiring management and maintenance of ever-changing persistent device configurations, (Paragraph 0007)];**

the system includes at least one networked device of the composite device type having the functionality of a predetermined number of other devices, the predetermined number being an integer greater than or equal to 2, **[Fixed point, integer number. May have a leading**

sign. May have leading zeros. (No currency symbol, (Paragraph 0786));

and each of the at least one networked device of the composite device type responds to an incoming device query message requiring a simple device description, **[Controlled Devices respond to discovery requests, accept incoming communications from User Control Points and may send Events to User Control Points, (Paragraph 0062)];**

by sending a simple device description (230) including the device type (232) as a composite device and a sub-device number (234) representing the predetermined number of other devices, **[Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description, (See Abstract)].**

- Regarding claim 18, Zintel teaches a computer program for controlling a networked device, the computer program being arranged to cause the networked device to carry out the steps of a method, **[Module. A component of a device, software program, or system that implements some "functionality", which can be embodied as software, hardware, firmware, electronic circuitry, or etc, (Paragraph 0060)].**

- Regarding claim 20, Zintel teaches a computer program recorded on a data carrier, **[Module. A component of a device, software program, or system that implements some "functionality", which can be embodied as software, hardware, firmware, electronic circuitry, or etc, (Paragraph 0060)]**.
- Regarding claim 21, Zintel teaches a network establishment and management protocol for controlling electronic devices, the protocol being recorded on a record medium, **[Additionally, User Datagram Protocol (UDP) and Internet Group Management Protocol (IGMP) multicast send/listen capability are included in the implementation, (Paragraph 0539)]**;
the protocol comprising: a compression algorithm (210) defining the mechanism for compression of said messages a definition (200) of a generic message format, the messages being compressed XML compliant messages, **[The description is expressed in XML and includes vendor-specific manufacturer information like the model name and number, serial number, manufacturer name, URLs to vendor-specific Web sites, etc. The description also includes a**

list of any embedded devices or services, as well as URLs for control, eventing, and presentation, (Paragraph 0010)];
and a definition (204) of message sequencing requirements, [FIG. 14 is a data flow diagram illustrating a typical browsing protocol sequence in the device control model of FIG.3, (Paragraph 0024)].

- Regarding claim 22, Zintel teaches a system in accordance with a network establishment and management protocol for combining electronic devices, **[Additionally, User Datagram Protocol (UDP) and Internet Group Management Protocol (IGMP) multicast send/listen capability are included in the implementation, (Paragraph 0539)].**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 3, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zintel et al. (US 6,222,530) as applied to claims 1 above, and further in view of Unger et al. (US 6,005,759).

- Regarding Claims 3, 10, 12, Zintel teaches the method according to claim 1, as described above. Zintel further teaches a universal plug and play (UPnP) device makes itself known through a set of processes-discovery, description, control, eventing, and presentation. Following discovery of a UPnP device, an entity can learn more about the device and its capabilities by retrieving the device's description. The description includes vendor-specific manufacturer information like the model name and number, serial number, manufacturer name, URLs to vendor-specific Web sites, etc. The description also includes a list of any embedded devices or services, as well as URLs for control, eventing, and presentation. The description is written by a vendor, and is usually based on a device template produced by a UPnP forum working committee. The template is derived from a template language that is used to define elements to describe the device and any services supported by the device. The template language is written using an XML-based syntax that organizes and structures the elements, **(See Abstract).**

Zintel further teaches that the device type value being selected from a device type hierarchy having predetermined top level elements including a controller device type, and a basic device type, **[The formal definition of a Device Type.**

A Device Definition includes a Device Type Identifier, the fixed elements in the Description Document, the required set of Service Definitions in the Root Device, and the hierarchy of required Devices and Service Definition, (Paragraph 0069)];

Zintel further teaches that at least one further level of subsidiary device types depending from the basic device type and inheriting properties of higher level device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type, **[This invention relates generally to dynamic connectivity among distributed devices and services, and more particularly relates to providing a capability for devices to automatically self-configure to interoperate with other peer networking devices on a network, such as in a pervasive computing environment, (Paragraph 0002)].**

Zintel further teaches that the device type value being selected from a device type hierarchy having predetermined top level elements including a controller device type and a basic device type, **[The formal definition of a Device Type. A Device Definition includes a Device Type Identifier, the fixed elements in the Description Document, the required set of Service Definitions in the Root Device, and the hierarchy of required Devices and Service Definition, (Paragraph 0069)];**

Zintel further teaches that at least one further level of subsidiary device types depending from the basic device type and inheriting properties of higher level

device types on which the subsidiary device type depends, but not including any further level of subsidiary device types depending from the controller device type, **[This invention relates generally to dynamic connectivity among distributed devices and services, and more particularly relates to providing a capability for devices to automatically self-configure to interoperate with other peer networking devices on a network, such as in a pervasive computing environment, (Paragraph 0002)].**

Zintel et al. differs from the claimed invention in that the simple device description message (230) is in the form of a token-compressed message compressed from a human-readable message format is not taught in Sequeira et al.

Unger teaches a method for compressing text includes steps of parsing words from text in an input file and comparing the parsed words to a predetermined dictionary. The dictionary has a plurality of vocabulary words in it and numbers or tokens corresponding to each vocabulary word. A further step is determining which of the parsed words are not present in the predetermined dictionary and creating at least one supplemental dictionary including the parsed words that are not present in the predetermined dictionary. The predetermined dictionary and the supplemental dictionary are stored together in a compressed file. Also, the parsed words are replaced with numbers or tokens corresponding to the numbers assigned in the predetermined and supplemental dictionary and the

numbers or tokens are stored in the compressed file, (**See Abstract**), and further teaches that when such a frequency table is used as the primary mechanism for determining the encoding of token in the compressed text, (**Column 1, lines 60 - 65**).

Unger provides the advantage of that the simple device description message (230) is in the form of a token-compressed message compressed from a human-readable message format.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel by including a token-compressed message compressed from a human-readable message format as taught by Unger.

One of ordinary skill in the art would have been motivated to make this modification in order provide the advantage of providing that the simple device description message (230) is in the form of a token-compressed message compressed from a human-readable message format.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,222,530. System and method for a master scheduler.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Shaq Taha** whose telephone number is 571-270-1921.

The examiner can normally be reached on 8:30am-5pm Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jeff Pwu** can be reached on 571-272-6798.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shaq Taha

7/17/2007



JEFFREY PWU
SUPERVISORY PATENT EXAMINER